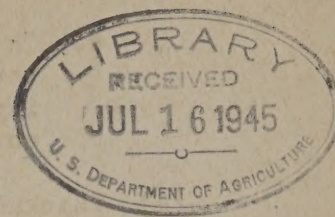


U. S. DEPARTMENT OF AGRICULTURE
Food Distribution Administration
Cotton and Fiber Branch
Utilization and Diversion Division

April 3, 1943

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COTTON INSULATION PROGRAM
(Fiscal Year 1943)



COTTON INSULATION SPECIFICATIONS NO. 6

SPECIFICATIONS FOR BATT TYPE COTTON
INSULATION WITH OR WITHOUT BACKING
MATERIAL

A. General Requirements

- (1) The insulation shall consist of a resilient fire-resistant treated cotton batt, with or without backing material.
- (2) The insulation shall be free from objectionable odor.

B. Specific Requirements(1) Composition of Batt

The cotton batt, excluding backing material and metal fasteners, if any, shall be made from lint cotton or from lint cotton mixed with unreworkeed card strips or comber waste, or combinations thereof. The batt shall contain at least 50 percent lint cotton by weight, and shall be composed of firmly matted, well-cleaned, sound staple fibers. Approval of the quality of any card strips and of any comber waste used shall be obtained from a representative of the Secretary of Agriculture.

(2) Fire Resistance Treatment

The batt part of the insulation shall be thoroughly and uniformly treated with a solution to make it fire-resistant, so that when subjected to the test prescribed in section C., paragraph (2), it will cease flaming within five seconds and cease glowing and smoking within one minute. The finished batt, excluding backing material and metal fasteners, if any, shall contain not more than 12 percent impregnating compounds, by weight.

(3) Length and Width of Batt

- a. The batts may be of any length.

- b. The batts with backing material may be of any width.
- c. The width of batts without backing material shall not exceed 24 inches, unless specific written authority for the manufacture and sale of wider widths is obtained from a representative of the Secretary.

(4) Thickness and Weight

- a. Thickness.- The minimum thickness of the insulation under these specifications, excluding backing material, when used, shall in no instance be less than one inch.
- b. Weight.- The weight of the insulation, excluding backing material and metal fasteners, if any, shall be .0556-pound or more per square foot per inch of thickness (weight shall be increased proportionately for greater batt thicknesses).

(5) Backing Material Requirements

Backing material, when used, shall be suitably attached to, or shall encase, the batt and shall extend not less than one inch beyond each width edge of the batting.

Backing material shall be flexible, moisture resistant, and shall meet the following requirements:

- a. The finished backing material shall have a minimum tensile strength of 15 pounds per inch machine direction, and 15 pounds per inch cross direction.
- b. The finished backing material shall show no water leakage when subjected for 12 hours to the following test: Two or more specimens, 6x6 inches in size, shall be folded to form boxes 2 inches square and 2 inches high, open at the top, the tabs, formed by folding, being held by convenient fasteners, such as paper clips. The boxes shall be placed on the ground surface of a piece of ground glass resting on black paper, or other suitable dark surface. The boxes shall be filled to within one-half inch of the top with water between 65° and 90° F. temperature. The boxes shall be lifted at the end of the 12-hour period, and the ground glass under them observed for transuded moisture, this being visible as a dark film on the surface of the glass.

C. Methods of Sampling, Measuring, and Testing

(1) Sampling

The following samples shall be drawn by or under the direction of an agent of the Secretary, from at least every 2,000 square yards of insulation manufactured:

- a. For the fire-resistance test prescribed in section C, paragraph (2), one sample, with backing material removed, of the thickness being manufactured, measuring 12 inches by 6 inches.
- b. For thickness and weight tests, a sufficient quantity to make the tests prescribed in section C, paragraph (3).

(2) Fire-resistance Test

A sample strip of insulation of the dimensions indicated in section C, paragraph (1)a, shall be suspended with the long dimension in a vertical position, and the end of the strip centered two inches above the tip of a bunsen type, self-generating gasoline blowtorch, having a 3/8-inch inner diameter burner tube. When operating at full pressure, the blowtorch must supply a minimum of 3000 BTU per hour. The blowtorch shall be supplied by the seller and approved by a representative of the Secretary. The strip shall be subjected to a full-pressure, vertical blue flame at least 4 inches high, for a period of one minute. After removal of the flame, the insulation must cease flaming within five seconds, and cease glowing and smoking within one minute.

(3) Determination of Thickness and Weight

- a. Thickness. - Determination of thickness shall be made (after removal of backing material and metal fasteners, if any) by piling uniform samples of insulation measuring at least 12 inches square, to an aggregate thickness of not less than 6 inches. These samples shall be measured between flat, rigid plates when subjected to a pressure of 3-1/2 ounces per square foot. The aggregate thickness thus obtained will be divided by the number of samples piled to determine the thickness of the insulation.

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- b. Weight. - Determination of weight shall be made (after removing backing material and metal fasteners, if any) by weighing one square foot of insulation under prevailing atmospheric conditions at the time thickness is determined. If the weight so determined is less than that specified in section B, paragraph (4)b, a redetermination shall be made after bringing the weight of the sample into equilibrium in an atmosphere having a relative humidity of 65 percent (plus or minus 2 percentage points), and a temperature between 70° and 80° F. Equilibrium shall be considered to have been attained when there is no progressive change in weight.

D. Marking

Each package of insulation delivered shall bear the following marks:

- (1) The contract number assigned to the seller by the United States Department of Agriculture.
- (2) The applicable specification number.
- (3) The thickness of the insulation contained therein.

The foregoing specifications have been approved pursuant to the provisions of paragraph 1 of the "Offer of the Secretary of Agriculture," CFB-CD 1500, in connection with the "Cotton Insulation Program (Fiscal Year 1943)."

E. H. On-chindro
Authorized Representative of the
Secretary, Cotton Insulation Program (Fiscal Year 1943)

UNITED STATES DEPARTMENT OF AGRICULTURE
Food Distribution Administration
Cotton and Fiber Branch
Utilization and Diversion Division

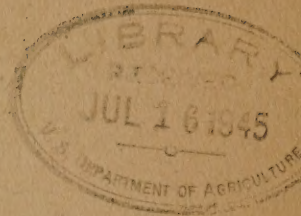
May 18, 1943

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COTTON INSULATION PROGRAM
(Fiscal Year 1943)

COTTON INSULATION SPECIFICATIONS NO. 7

SPECIFICATIONS FOR BATT TYPE COTTON
INSULATION WITH OR WITHOUT BACKING
MATERIAL

A. General Requirements

- (1) The insulation shall consist of a resilient fire-resistant treated cotton batt, with or without backing material.
- (2) The insulation shall be free from objectionable odor.

B. Specific Requirements(1) Composition of Batt

The cotton batt, excluding backing material and metal fasteners, if any, shall be made from lint cotton or from lint cotton mixed with unworked card strips or comber waste, or combinations thereof. The batt shall contain at least 50 percent lint cotton by weight, and shall be composed of firmly matted, well-cleaned, sound staple fibers. Approval of the quality of any card strips and of any comber waste used shall be obtained from a representative of the Secretary of Agriculture.

(2) Fire Resistance Treatment

The batt part of the insulation shall be thoroughly and uniformly treated with a solution to make it fire-resistant, so that when subjected to the test prescribed in section C, paragraph (2), it will cease flaming within five seconds and cease glowing and smoking within one minute. The finished batt, excluding backing material and metal fasteners, if any, shall contain not more than 12 percent impregnating compounds, by weight.

(3) Length and Width of Batt

- a. The batts may be of any length.
- b. The batts with backing material may be of any width.

- c. The width of batts without backing material shall not exceed 24 inches, unless specific written authority for the manufacture of wider widths is obtained from a representative of the Secretary.

(4) Thickness and Weight

- a. Thickness.- The minimum thickness of the insulation under these specifications, excluding backing material, when used, shall in no instance be less than $\frac{3}{4}$ inch.
- b. Weight.- The weight of the insulation, excluding backing material and metal fasteners, if any, shall be .0417-pound or more per square foot per $\frac{3}{4}$ inch of thickness (weight shall be increased proportionately for greater batt thicknesses).

(5) Backing Material Requirements

Backing material, when used, shall be suitably attached to, or shall encase, the batt and shall extend not less than one inch beyond each width edge of the batting.

Backing material shall be flexible, moisture resistant, and shall meet the following requirements:

- a. The finished backing material shall have a minimum tensile strength of 15 pounds per inch machine direction, and 15 pounds per inch cross direction.
- b. The finished backing material shall show no water leakage when subjected for 12 hours to the following test: Two or more specimens, 6x6 inches in size, shall be folded to form boxes 2 inches square and 2 inches high, open at the top, the tabs, formed by folding, being held by convenient fasteners, such as paper clips. The boxes shall be placed on the ground surface of a piece of ground glass resting on black paper, or other suitable dark surface. The boxes shall be filled to within one-half inch of the top with water between 65° and 90° F. temperature. The boxes shall be lifted at the end of the 12-hour period, and the ground glass under them observed for transuded moisture, this being visible as a dark film on the surface of the glass.

C. Methods of Sampling, Measuring, and Testing

(1) Sampling

The following samples shall be drawn by or under the direction of an agent of the Secretary, from at least every 2,000 square yards of insulation manufactured:

- a. For the fire-resistance test prescribed in Section C, paragraph (2), one sample, with backing material removed, of the thickness being manufactured, measuring 12 inches by 6 inches.
- b. For thickness and weight tests, a sufficient quantity to make the tests prescribed in Section C, paragraph (3).

(2) Fire-resistance Test

A sample strip of insulation of the dimensions indicated in section C, paragraph (1)a, shall be suspended with the long dimension in a vertical position, and the end of the strip centered two inches above the tip of a bunsen type, self-generating gasoline blowtorch, having a 3/8-inch inner diameter burner tube. When operating at full pressure, the blowtorch must supply a minimum of 3000 BTU per hour. The blowtorch shall be supplied by the seller and approved by a representative of the Secretary. The strip shall be subjected to a full-pressure, vertical blue flame at least 4 inches high, for a period of one minute. After removal of the flame, the insulation must cease flaming within five seconds, and cease glowing and smoking within one minute.

(3) Determination of Thickness and Weight

- a. Thickness.-- Determination of thickness shall be made (after removal of backing material and metal fasteners, if any) by piling uniform samples of insulation, measuring at least 12 inches square, to an aggregate thickness of not less than 6 inches. These samples shall be measured between flat, rigid plates when subjected to a pressure of 3-1/2 ounces per square foot. The aggregate thickness thus obtained will be divided by the number of samples piled to determine the thickness of the insulation.
- b. Weight.-- Determination of weight shall be made (after removing backing material and metal fasteners, if any) by weighing one square foot of insulation under prevailing atmospheric conditions at the time thickness is determined. If the weight so determined is less than that specified in section B, paragraph (4)b, a redetermination shall be made after bringing the weight of the sample into equilibrium in an atmosphere having a relative humidity of 65 percent (plus or minus 2 percentage points), and a temperature between 70° and 80° F. Equilibrium shall be considered to have been attained when there is no progressive change in weight.

D. Marking

Each package of insulation delivered shall bear the following marks:

- (1) The contract number assigned to the seller by the United States Department of Agriculture.
- (2) The applicable specification number.
- (3) The thickness of the insulation contained therein.

The foregoing specifications have been approved pursuant to the provisions of paragraph 1 of the "Offer of the Secretary of Agriculture," CFB-CD 1500, in connection with the "Cotton Insulation Program (Fiscal Year 1943)," and shall be applicable to insulation to be manufactured pursuant to applications already approved; provided that the seller holding the approved application(s) consents thereto.

E. H. Omohundro

Authorized Representative of the
Secretary, Cotton Insulation
Program (Fiscal Year 1943)

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Cotton and Fiber Branch

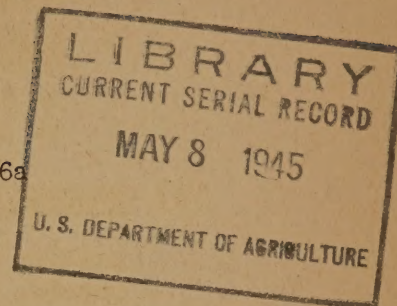
Utilization and Diversion Division

May 24, 1944

COTTON INSULATION PROGRAM
(Fiscal Year 1943)

COTTON INSULATION SPECIFICATIONS NO. 6a

SPECIFICATIONS FOR BATT TYPE COTTON
INSULATION WITH OR WITHOUT BACKING
MATERIAL



A. General Requirements

- (1) The insulation shall consist of a resilient fire-resistant treated cotton batt, with or without backing material.
- (2) The insulation shall be free from objectionable odor.

B. Specific Requirements

(1) Composition of Batt

The cotton batt, excluding backing material and metal fasteners, if any, shall be made from lint cotton or from lint cotton mixed with unworked card strips or comber waste, or combinations thereof. The batt shall contain at least 50 percent lint cotton by weight, and shall be composed of firmly matted, well cleaned, sound staple fibers. Approval prior to use of the quality of any card strips and of any comber waste shall be obtained from a representative of the Secretary of Agriculture.

(2) Fire Resistance Treatment

The batt part of the insulation shall be thoroughly and uniformly treated with a solution to make it fire-resistant, so that when subjected to the test prescribed in Section C, Paragraph (2a), it will not flame-crawl or flash-crawl on the surfaces, edges, or ends for a distance of more than 6 inches, and when subjected to the test prescribed in Section C, Paragraph (2b) it will cease flaming within five seconds and cease glowing and smoking within one minute. The finished batt, excluding backing material and metal fasteners, if any, shall contain not more than 15 percent impregnating compounds by weight.

(3) Length and Width of Batt

- a. The batts may be of any length.
- b. The batts with backing material may be of any width.
- c. The width of batts without backing material shall not exceed 24 inches, unless specific written authority for the manufacture and sale of wider widths is obtained from a representative of the Secretary.

(4) Thickness and Weight

- a. Thickness - The minimum thickness of the insulation under these specifications, excluding backing material when used, shall in no instance be less than one inch.
- b. Weight - The weight of the insulation, excluding backing material and metal fasteners, if any, shall be .0556-pound or more per square foot per inch of thickness (weight shall be increased proportionately for greater batt thicknesses).

(5) Backing Material Requirements

Backing material, when used, shall be suitably attached or shall encase, the batt. Except in instances specified by the buyer, such backing material shall extend not less than one inch beyond each width edge of the batting.

Backing material shall be flexible, moisture resistant, and shall meet the following requirements:

- a. The finished backing material shall have a minimum tensile strength of 15 pounds per inch machine direction, and 15 pounds per inch cross direction.
- b. The finished backing material shall show no transuded moisture when subjected for 12 hours to the following test: Two or more specimens, 6x6 inches in size, shall be folded to form boxes 2 inches square and 2 inches high, open at the top, the tabs, formed by folding, being held by convenient fasteners, such as paper clips. The boxes shall be placed on the ground surface of a piece of ground glass resting on black paper, or other suitable dark surface. The boxes shall be filled to within one-half inch of the top with water between 65° and 90° F. temperature. The boxes shall be lifted at the end of the 12-hour period, and the ground glass under them observed for transuded moisture, this being visible as a dark film on the surface of the glass.

C. Method of Sampling, Measuring and Testing

- (1) Sampling - The following samples shall be drawn by, or under the direction of, an agent of the Secretary from at least every 2,000 square yards of insulation manufactured.
 - a. For test prescribed in Section C, Paragraph (2a), one sample, with backing material removed, of the thickness and width being manufactured, measuring not less than 36" in length.
 - b. For test prescribed in Section C, Paragraph (2b), two samples, with backing material removed, of the thickness being manufactured, measuring not less than 12" by 6", the long dimension of one sample to be parallel to the length of the batt and of other sample parallel to the width.

- c. For thickness and weight test, a sufficient quantity to make the test prescribed in Section C, Paragraph (3).

(2) Fire Tests

- a. Flame-crawl or flash-crawl test - Sample strips of insulation of the dimensions indicated in Section C, Paragraph (1a), after being split into two layers, shall be placed on a flat surface. Each layer in this position, first on one side and then on the other, shall be subjected across the entire width to the flame of a lighted candle.
- b. Fire Resistance Test - Sample strips of insulation of the dimensions indicated in Section C, Paragraph (2b), shall be suspended with the long dimension in a vertical position, and the end of the strip centered two inches above the tip of a bunsen or equivalent type of burner, such as a blowtorch.^{1/} The strip shall be subjected to a full-pressure, vertical blue flame at least 4 inches high, for a period of one minute. After removal of the flame, the insulation must cease flaming within 5 seconds, and cease glowing and smoking within one minute.

(3) Determination of Thickness and Weight

- a. Thickness - Determination of thickness shall be made (after removal of backing material and metal fasteners, if any) by piling uniform samples of insulation measuring at least 12 inches square, to an aggregate thickness of not less than 6 inches. These samples shall be measured between flat, rigid plates when subjected to a pressure of 3-1/2 ounces per square foot. The aggregate thickness thus obtained will be divided by the number of samples piled to determine the thickness of the insulation.
- b. Weight - Determination of weight shall be made (after removing backing material and metal fasteners, if any) by weighing one square foot of insulation under prevailing atmospheric conditions at the time thickness is determined. If the weight so determined is less than that specified in Section B, Paragraph (4b), a redetermination shall be made after bringing the weight of the sample into equilibrium in an atmosphere having a relative humidity of 65 percent (plus or minus 2 percentage points), and a temperature between 70° and 80° F. Equilibrium shall be considered to have been attained when there is no progressive change in weight.

^{1/} The burner used must be supplied by the seller and approved by a representative or agent of the Secretary. When operating at full pressure, the burner must supply a minimum of 3000 BTU per hour.

D. Marking

At the time of manufacture, the following marks shall be applied to each package, roll or other unit of insulation:

- (1) The contract number assigned to the seller by the United States Department of Agriculture.
- (2) The applicable specification number.
- (3) The thickness of the insulation contained therein.

The foregoing specifications have been approved pursuant to the provisions of Paragraph 1 of the "Offer of the Secretary of Agriculture," CFB-CD-1500, in connection with the "Cotton Insulation Program (Fiscal Year 1943)", and shall be applicable to insulation to be manufactured pursuant to applications already approved: Provided that the seller holding the application(s) consents thereto.

E. H. O'Connell
Authorized Representative of
the Secretary, Cotton Insulation
Program (Fiscal Year 1943)